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Dehorning and castrating cattle.

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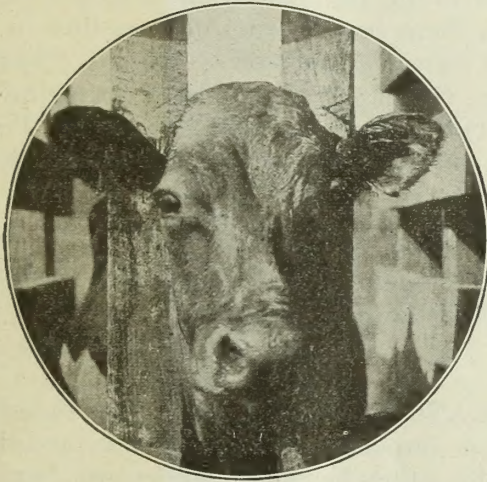
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DEHORNING AND CASTRATING CATTLE

U.S. COMP. ZOOLOGY,
CAMBRIDGE, MASS.

FRANK W. FARLEY

Animal Husbandry Division



FARMERS' BULLETIN 949

UNITED STATES DEPARTMENT OF AGRICULTURE

Contribution from the Bureau of Animal Industry

JOHN R. MOHLER, Chief

Washington, D. C.

April, 1918

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DEHORNING cattle makes it easier to handle the animals and insures that each one will have a more equal chance at the feed trough when placed in the feed lot.

It renders the animals harmless to attendants, and prevents them from goring one another in the feed lot or in transit to market. Goring in transit causes a greater shrinkage in weight, injures the skin for commercial purposes, and leaves the flesh in a bruised condition, which naturally detracts from its value.

The removal of the horns makes for more uniformity in the appearance of a bunch of cattle either in the feed lot or in the herd.

CASTRATION of bull calves not intended for sires is very important, because if they are allowed to run too long they become troublesome, begin to look "staggy," and lose the refinement desired in feeder steers.

The quality of flesh obtained from the carcass of the steer is superior to that which would have been obtained if the calf had been allowed to remain a bull.

The operation removes inferior or scrub bulls from the herd and retains them for feeders.

DEHORNING AND CASTRATING CATTLE.

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SCOPE OF BULLETIN.

THE EXPERIENCED stockman is familiar with all the operations and methods that are outlined in this bulletin; it is therefore to the small stockman or the man who is just starting in the cattle business that this bulletin is designed to be helpful. It is intended to present some facts and explain certain methods of dehorning and castrating clearly and concisely so that they may be easily understood. The article is not designed in any way as a treatise on either of the two subjects.

The farmer who maintains only a medium-sized farm herd of cattle can not devote his entire attention to them as the ranchman does, but must give a part of it to other farm duties; therefore it is to his advantage, ordinarily, to dehorn, castrate, brand, and possibly vaccinate all at the same round-up.

DEHORNING.

The practice of dehorning cattle is almost universal so far as high-grade beef steers are concerned. The majority of feeders and practically all the well-finished steers that appear on the markets of to-day have been dehorned. It is often desirable to dehorn the heifers as well as the steers, especially where they are to be fed in troughs for a part of the year. Various methods have been followed and various devices used in dehorning. In some instances the cruel practice of throwing the animal on the ground and chopping its horns off with an ax has been followed, while in other instances, and espe-

cially on the western ranges, dehorning chutes of heavy timbers have been constructed and the horns removed with an ax or a saw. At the same time numerous concoctions have been used for applying to the wound made by removing the horn.

In this bulletin are shown illustrations and plans of a simple, convenient, and secure dehorning chute that has proved to be very satisfactory. The expense of building a chute of this kind is very small, and the chute can be conveniently arranged and used for castrating, branding, and vaccinating as well as for dehorning.

In general the purposes to be accomplished by dehorning are:

1. To make the animals more easily handled.
2. To insure that each animal has an equal chance at the feed trough when placed in the feed lot.
3. To render the animals less dangerous to attendants, and to prevent their goring one another in the feed lot or in transit to market, which causes a greater shrinkage in weight, injures the skin for commercial purposes, and leaves the flesh in a bruised condition, thus detracting from its value.
4. To give more uniformity to the appearance of the bunch of cattle.

In the dehorning operation the horns may be removed either when the calf is only a few days old, by means of a caustic, or, when the horn is either partially or wholly developed, by sawing or clipping. The latter may be done any time after the animal is past four months of age.

USE OF CAUSTIC FOR YOUNG CALVES.

A simple and easy though not always practicable method of dehorning is to use a caustic on the undeveloped horns when the calves are only a few days old. Either caustic soda or caustic potash may be used. These come in sticks about the size of a lead pencil and may be purchased at any drug store.

The main objection to this method of dehorning is that it requires too much attention on the part of the stockman. Calves, coming as they do in seasons when there is a rush to get crops either planted or harvested, are almost certain to be neglected and some will become too old for the use of the caustic. However, if the calves are kept in a pen or separated from their mothers a part of the time there should be no difficulty on this score. Another objection to the use of caustic is that more pains must be taken than is necessary in cutting off the horns with a saw or clippers. The method of using the caustic is very simple, however, and if a few precautions are observed no trouble should result.

To obtain the best results the operation should be performed when the calf is from 4 to 10 days old. At this age the knob or bud is

only loosely attached to the skull and appears more as a part of the skin. The hair should be clipped off over and around the horns and vaseline applied around the edge of the hair. This is to prevent the caustic from spreading and causing a sore on the skin adjacent to the horn. The end of the stick of caustic is then slightly moistened and rubbed on each horn alternately three or four times, allowing it to dry each time before applying to the next. The stick should be wrapped in paper with one end exposed, as the caustic will burn the hands if it gets on them. Extreme care should also be taken not to have the stick so wet that the solution from it will run down the side of the calf's head. Neither should the operation be done when there is a likelihood of rain in a few hours, unless the calves are to be kept under shelter, because the rain will wash the caustic down into the hair over the face and possibly into the eyes, causing a severe burn and probably loss of sight. When the caustic is properly used a scab will form over the bud and drop off within a few days.

When the operation is successfully performed with caustic potash it leaves the head in better shape than when done later with saw or clippers. This is especially desirable in heifer calves that are to be kept in the breeding herd.

DEHORNING WITH SAW OR CLIPPERS.

After the horns of calves have reached a certain size it becomes necessary to cut them off. Saws and clippers are the two common instruments used for this purpose. The clippers are quicker and less painful to the animal, but the saw does not crush the horn as do the clippers, especially in the case of old animals whose horns have become hard and brittle. On the other hand, when the saw is used there is not so much bleeding, as the action of the saw causes the blood vessels to be lacerated, and a clot of blood forms quickly.

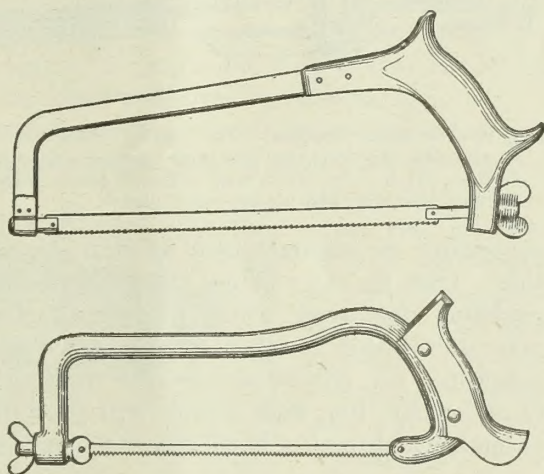


FIG. 1.—Dehorning saws. These saws are light and convenient. A one-inch blade is the most satisfactory because it is not so liable to run to one side in the horn. The blade should be kept tight to avoid this trouble.

Clippers give very good results with young cattle, but with old animals the saw should be used, as the crushing of the hard bone in an older animal causes the bone to sliver, which makes a wound that

heals very slowly. The loss of blood from older animals will also be more likely to cause trouble than with younger animals. Although some stockmen prefer using the clippers altogether, it is much safer to use the saw altogether than it is to use the clippers altogether. A desirable compromise would be to use the saw on the hard, brittle horns of the older animals and the clippers on the soft, tender horns of the younger animals.

Whichever instrument is used, care should be taken to cut enough of the horn to insure that unsightly stubs will not grow out. From

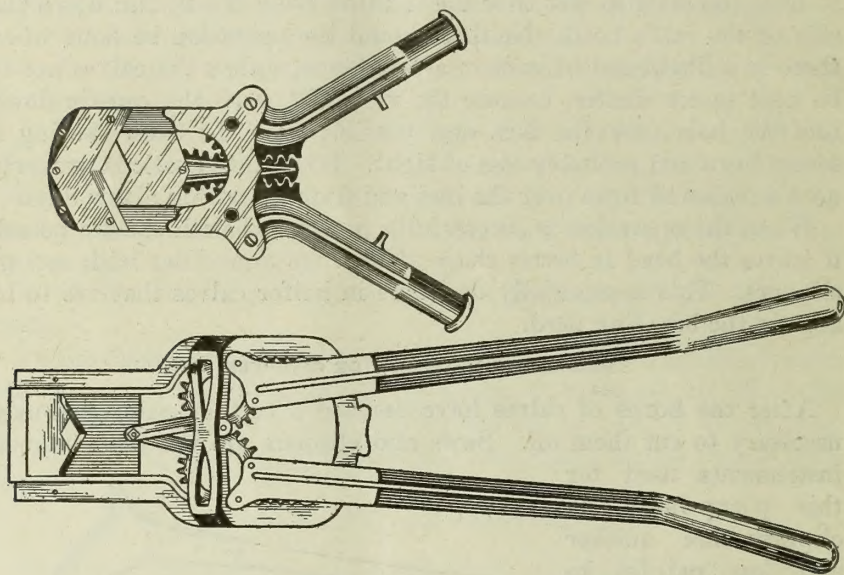


FIG. 2.—Dehorning clippers. The cutting edges are formed of two V-shaped knives which come together and give four cutting surfaces. When the handles are pulled together the horn is cut in four different places, which lessens the tendency to crush the horn, common with square-edged blades.

one-eighth to one-half inch of skin should be taken off to insure this. (See fig. 4.) When this is done the horn-forming cells are probably destroyed, which prevents further growth of horns. If none of the skin is taken off the stubs of horns will grow out and sometimes are almost as effective in hooking as the original horn. Occasionally, too, such a stub will grow down into the eye of the animal, which makes it necessary to perform the operation again.

TREATMENT AFTER DEHORNING.

Cattle should never be dehorned during warm weather, that is, weather that is warm enough to cause danger of the wound becoming infested with screw worms. If there is any danger of flies whatever, some fly repellant should be applied to the wound immediately after the animal is dehorned. Either coal tar or pine tar is very

satisfactory. Both are nonirritating and adhere well to the skin and the wound. Whichever of these is used, if too thick to apply conveniently, may be thinned with fish oil or linseed oil. Either an ordinary paintbrush or a swab made by tying a rag on a stick may be used to apply the tar.

The practice of placing a piece of cotton outing flannel over the wound made by dehorning, as advocated by some stockmen, usually meets with poor results, except possibly when the cattle are to be turned into fields where they

will be exposed to burs or to severe winds. In such cases the cloth protects the wound to some extent. Ordinarily it requires too much time and trouble, and not 50 per cent of the cloths will stick after they are put on. The practice of using a hot iron to sear the wound and stop the bleeding is not practicable nor is it necessary.

If in spite of all precautions the wound becomes infested with screw worms they may be removed by saturating a piece of absorbent

cotton with chloroform and inserting it into the wound, or by pouring gasoline into the horn cavities. The chloroform or gasoline will kill the screw worms, after which they may be removed with a pair of forceps, a probe, or by forcing the

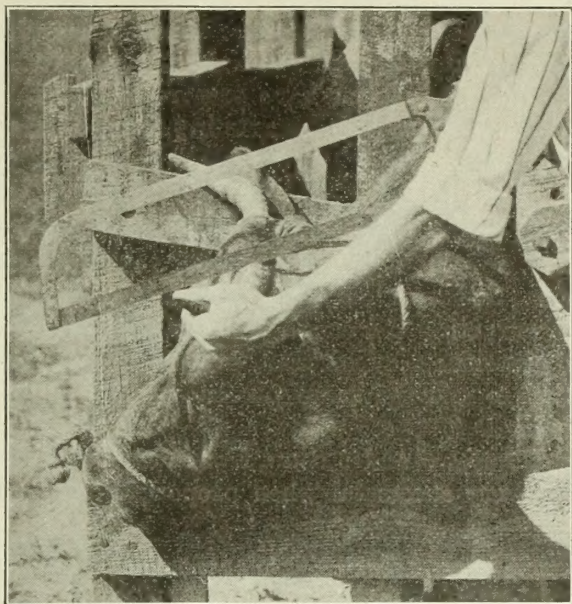


FIG. 3.—Correct position for removal of horn.

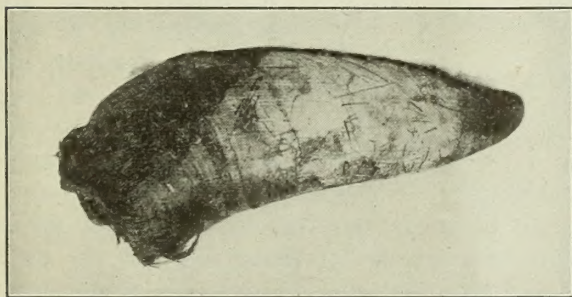


FIG. 4.—Horn after proper cutting. Note hair and skin attached.

animal's head to one side and allowing them to drop out. Carbolic acid or some other efficient disinfectant may be used for killing the

worms, but these are not so effective as chloroform or gasoline. If the carbolic-acid solution is used, add 3 tablespoonfuls of the acid to a quart of water. A stronger solution than this is liable to injure the skin or the tender tissue of the wound. This solution can be applied with a syringe or by using a brush or a swab.

After the worms have been removed either pure pine tar or one of the coal-tar disinfectants in proper dilution may be applied.

DEHORNING CHUTES—PLANS AND METHODS.

In drawing the accompanying plans for dehorning chutes (figs. 7, 8, 9, and 10) it was convenient to show all material sawed to dimension; however, this does not mean that sawed lumber must be used in constructing the chute. Rough posts and scrap planks of different dimensions may be used, provided the posts are smooth enough to nail to and the scrap planks are of sufficient strength to hold the animal.

Figures 5 and 6 show front views of two types of chutes. Both are very successful when properly built. The head clamp in both

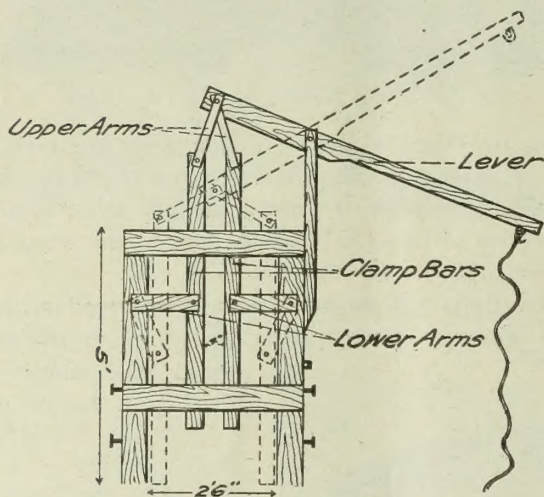


FIG. 5.—Plan of dehorning chute, front view.

types is operated from the side by means of a lever as shown in the drawings. In figure 5 the position of the lever and head-clamp bars, when open, is represented by dotted lines. A short rope is attached to the end of the lever for pulling it down and fastening it when closed. The lever may be of any length desired, but should not be so long and heavy that it will not allow the clamps

to open with their own weight. The arms fastened to the top of the head-clamp bars may be made of strap iron $1\frac{1}{2}$ to 2 inches wide, in which case four bars are used. Wood also may be used, in which case only two bars are used, one on each side of the lever. The lower arms are best made of wood. When the head-clamp bars are closed they should be about 4 inches apart. Four-inch blocks should be placed between the two bars at the crosspieces to hold them steady.

Figure 6 shows the front view of the second type of chute. The drawing shows one side made sloping. The advantage of this is that the bottom may be made narrower. This works better for smaller animals, and large animals are not so likely to get down. The dotted lines show the position of the head clamp when open. To hold the clamp closed, the lever is notched on the underside and works in a loop with a bolt or pin through it so that the notches will drop over it. A pin or bolt is inserted in the hole in the crossbar at the top to hold the other head-clamp bar. For small animals this clamp bar is left closed. This type of chute is easier to construct than the one shown in figure 5, but will not permit the cattle to pass out through the front.

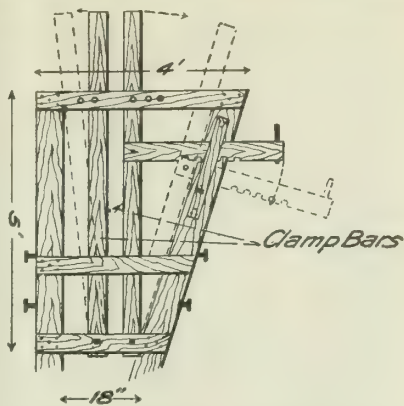


FIG. 6.—Another type of dehorning chute with sloping side.

Figures 7 and 8 show the sides of the chute, which may be used for either type. The gate is convenient for letting the animal out of the chute and may also be used to advantage in vaccinating. It may be placed on whichever side is most convenient, except that it can not be placed on the sloping side of the type shown in figure 6.

After the animal is in the chute and the head clamp is closed, a bull ring should be placed in its nose, or a loop placed around the neck and a noose slipped on its nose; the head is then pulled around and the end of the rope fastened to the pin shown on the side of the front post. This forces the animal's head to one side, so that the outside horn will extend forward, which makes it convenient for sawing or clipping. After one horn is taken off the head can be forced to the other side by fastening the rope to the pin in the opposite post.

CASTRATION OF CATTLE.

The primary reason for castrating bull calves and making steers of them is that the quality of the flesh of steers is superior to that of bulls, and bull calves that are allowed to run too long without being castrated lose the refinement desired in feeder steers.

A very important result of castrating, aside from the increased value of the animal from a beef standpoint, is that it removes inferior or scrub bulls from the herd.

TIME TO CASTRATE.

It is very important that bull calves be castrated before they become troublesome and before they begin to look "staggy." Calves

from a week to 6 or 8 months old may be safely castrated. If the calf is too young, however, the testicles are undeveloped and may be difficult to secure, while if more than 8 months old severe hemorrhage may result which may terminate fatally.

The usual time to castrate calves is when they are about 4 months old.

A dry, cool day during a period when grass or forage is plentiful should be selected, if possible, but the operation should not be delayed too long because of the lack of these conditions. The calf may

be castrated in the dehorning chute at the same time he is being dehorned, or he may be thrown to the ground for the operation.

THROWING THE ANIMALS.

On the range the common method of throwing an animal consists in casting a noose around the fore leg and tightening it quickly. This causes the animal to fall. Another method is to place a rope around the animal's neck and another around its hind legs. Both ropes are then tightened and an assistant throws the animal by "tailing" it. The animal can be secured on the ground by tying the rope on its neck to a post at one end of the pen and the one on its hind legs to a post at the other end of the pen, or the fore and hind legs may be brought together as far as possible and tied securely. The latter method is known as "hog tying."

MATERIALS REQUIRED.

The only implements necessary for castrating are a sharp knife and a pan containing a 3 per cent solution of a standard disinfectant. An ordinary pocketknife with a medium-sized blade will do.

If the scrotum or bag is filthy it should be thoroughly washed with the disinfectant, otherwise this will not be necessary. The knife should be kept in the disinfectant at all times when not in use.

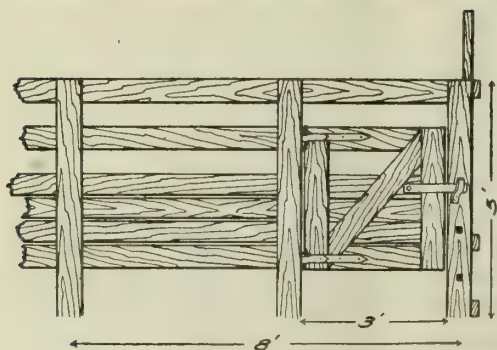


FIG. 7.—Side of dehorning chute, showing gate.

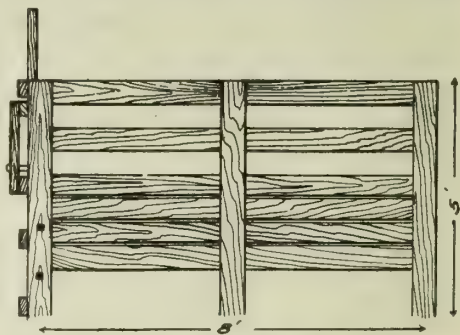


FIG. 8.—Side of dehorning chute without gate.

METHOD OF OPERATION.

There are two ways of making the incision, depending upon whether or not it is desired to make a fancy feeder of the calf. The first method consists in grasping the scrotum with the left hand and cutting off the lower one-fourth or one-third. This should expose the ends of both testicles, but if one of them can not be seen it can usually be pushed out by pressing on the abdomen by the side of the scrotum. The testicles may then be pulled out one at a time and removed. About 1 inch of the cord should be removed with the testicle to prevent

the severed end from protruding from the incision. In young calves the cord may be cut off directly, but in older calves the cord should be stretched over the forefinger and scraped with the edge of the knife until it parts. This lacerates the ends of the cord and serves to reduce the hemorrhage. A safer way of severing the cord is by the use of an emasculator, an instrument shaped like a pair of pliers with a broad, corrugated crushing surface and

a cutting edge (fig. 11). With this instrument the cord is cut and at the same time so lacerated as to cause a minimum of bleeding. The *écraseur* (fig. 12) is another instrument for severing the cord. With this the crushing is accomplished by a chain loop which is placed around the cord and slowly tightened until the cord is severed. The latter instrument gives the best results, but the emasculator permits of quicker work.

The second method consists in slitting the scrotum parallel to the median line, which divides the two sides, instead of cutting off the end as in the first method. The cuts are made directly over the middle of each testicle. The testicles are then taken out through the separate cuts and removed as already described. In this operation care



FIG. 9.—View of chute with head clamp closed, showing side gate.

should be taken to make the cuts clear to the end of the scrotum in order to insure perfect drainage from the wound.

The first method is just as satisfactory as the second, except in the case of fancy feeders that are to be shown at fairs, when it is desirable to have a large cod or purse which will be filled with fat when the animal is in high condition.

CASTRATION OF LARGE ANIMALS.

If a large animal is to be castrated he may be restrained in the same manner as described for calves. Greater precautions, however,

should be taken to prevent too much bleeding, as there is a considerable hemorrhage from the cord in older animals. For this reason it is advisable to use the emasculator or the *écraseur* for severing the cord. In the absence of these instruments the cord may be seared off with a red-hot iron, care being taken to protect surrounding parts from the heat; or it may be scraped as described before.

AFTER-TREATMENT.

Ordinarily no after-treatment is necessary. The animals should be



FIG. 10.—View of chute with head clamp open, showing position of handle.

turned into a pasture as soon as the operation is completed, as there is much less danger of infection of the wound in a pasture than around pens or barns.

If the operation is performed during fly time, pine tar should be applied to the wound to keep off the flies. Unless the wound becomes infested with screw worms or maggots no trouble will ordinarily result. Should this occur a simple treatment consists in saturating

a piece of absorbent cotton with chloroform and inserting it into the wound, or in filling a pint cup with gasoline and allowing the cod

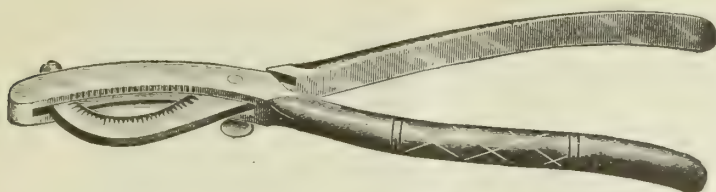


FIG. 11.—Emasculator. This instrument has a broad, corrugated, crushing surface and a cutting edge. It is applied to the cord, severing it with little loss of blood.

to dip into it. The chloroform or gasoline kills the worms, after which pine tar should be applied to prevent further infestation.

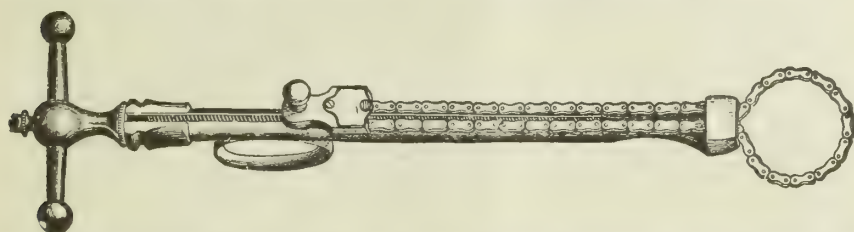


FIG. 12.—Castrating écraseur. The chain loop of this instrument is passed around the cord attached to the testicle and gradually tightened by slowly turning the handle. The cord is thereby slowly crushed and severed, so that very little blood is lost.

When a mature bull is to be castrated or a calf is ruptured a competent veterinarian should be called in, as the operation is too serious for the average stockman.

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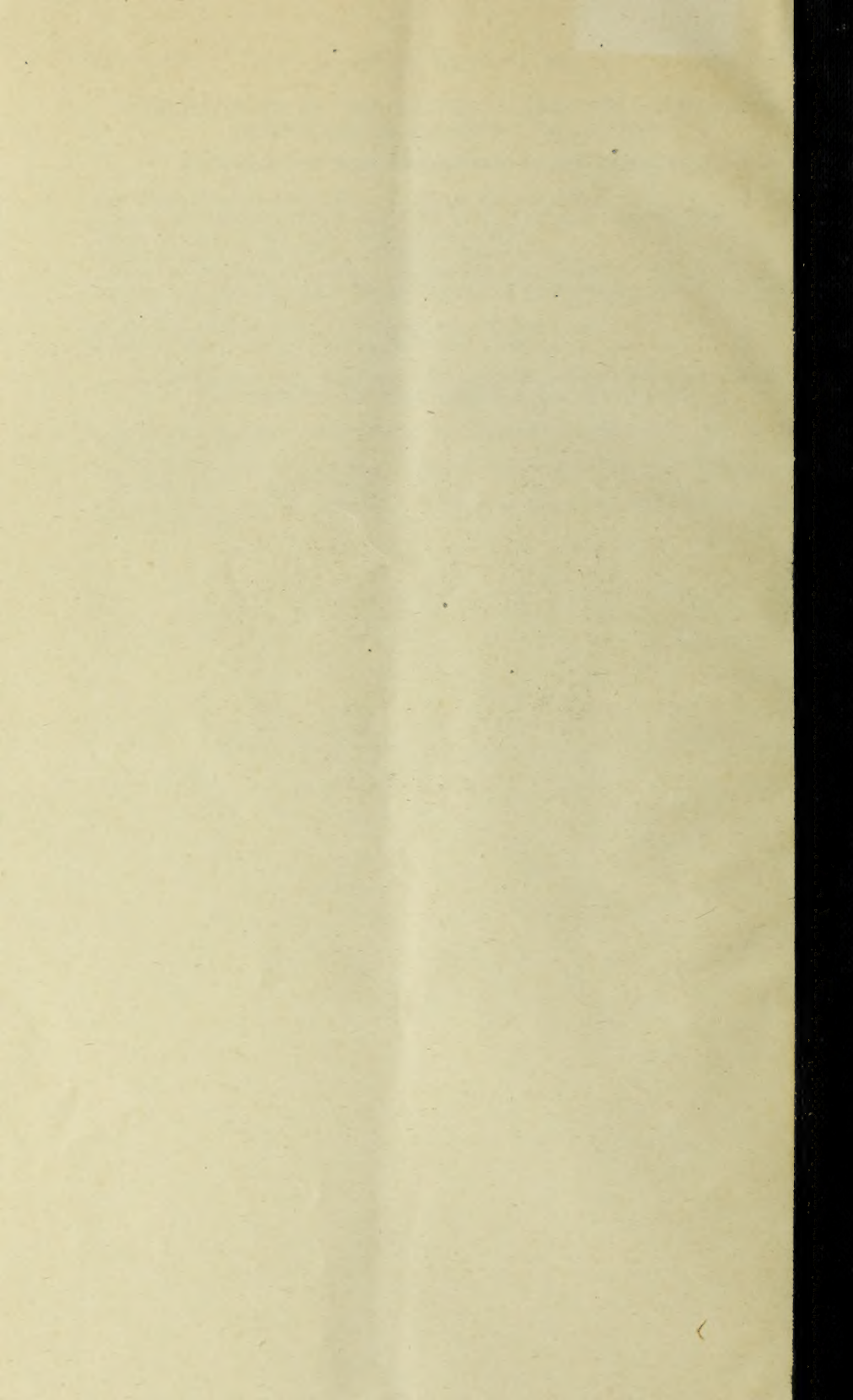
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